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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,951	02/10/2006	Munetoshi Kawamura	375462-000001	7498
3713	7590	03/25/2011		
DLA PIPER LLP US 1999 Avenue of the Stars Suite 400 LOS ANGELES, CA 90067			EXAMINER ANDERSON, JERRY W	
			ART UNIT	PAPER NUMBER
			1781	
			NOTIFICATION DATE	DELIVERY MODE
			03/25/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary**Application No.**

10/567,951

Applicant(s)

KAWAMURA, MUNETOSHI

Examiner

JERRY W. ANDERSON

Art Unit

1781

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-11 and 17-22 is/are pending in the application.
- 4a) Of the above claim(s) 5-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-040)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Examiner acknowledges the receipt of the Applicant's Amendment, mailed 01/21/11. Claims 1-4 & 12-16, cancelled, Claims 5-11 withdrawn, claims 17-22 amended, Claims 17-22 pending.

Claim Objections

2. Claim 17 is objected to because of the following informalities, the applicant has amended the claim by the addition of the term "electricvally". Examiner submits that the term should be "electrically" and will examine the claim accordingly. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 17-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding claims 17-22, the applicant has amended the claims to include the limitation "selectively connecting a source of AC and DC voltage directly to said food tray".

6. It is not clear if the source of ac and dc voltage is connected or not. It appears as if there is a choice of whether the voltage source will be connected or not. The application of a voltage is critical to the claimed invention. The metes and bounds of the claims are not clear, the claims are indefinite.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 17-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa, K., (JP 62-297677) in view of Ito, A. (JP-2002 -034531)

10. Regarding claims 17, 18, 19, 29, 21, and 22, Ogawa discloses the claimed invention including a shelf in a refrigerator and the shelf is used as the electrode, (§ 1, pg. 5, claim 2, '677) having a food on the shelf, (§ 1, pg. 5, '677) having a heat pump to cool the refrigerator/freezer, (§ 2, pg. 3, '677) applying an AC and DC voltage simultaneously to the food, (§ 1, pg. 4, claim 5, '677) wherein the DC voltage is negative, (§ 1, pg. 5, '677) further, the voltages can be applied for a set duration of time by the use of a timer, such that the voltages can be turned off after a set time following the closing of the freezer door. (§2, pg 5, '677) Ogawa discloses the use of the invention on fruits, vegetables and grains. (§1&2, pg 5, §2, pg 7, '677)

11. Ogawa is silent as to placing the food on the shelf, simply stating that shelf holds food, and cooling the interior

of the refrigerator, however one of ordinary skill in the art at the time of the invention would have found it obvious to place the food on the food shelves of Ogawa's refrigerator, to use the heat pump mechanism of the refrigerator/freezer to cool or freeze the food, and to use the disclosed device as intended.

12. Ogawa lacks the use of DC voltages that are greater, in a negative sense than -180 V, and AC voltages that are between 180 V to 3500 V, and temperatures of about -20°C.

13. Ito discloses the freezing of fish or meat, (§ 14, '531) in an electric field, and the use of DC voltages of -200 to -2000 V and AC voltages of 150 V and 800 V. (§ 42, '531) temperatures used ranged from +10 °C to -40°C. (Drawing 21, '531) Ito teaches applying DC voltages and AC voltages separately, and sequentially, and the application of the selected voltages can be controlled by a timer. (drawing 13, §24, 25, '531)

14. As shown in drawing 20, the electrode plate (element 82) was set in the freezer, (element 80) the voltage generator (element 81) was connected to this electrode plate (element 82), and the processed material (element F) was laid on the electrode plate, (drawing 20, §32, '531), the voltage was applied to the processed material, pork. (element F) (drawing 20, § 33, '531)

15. It would have been obvious to one of ordinary skill in the art that stating that the voltage was applied to the processed material means that the food was in electrical connection with the electrode plate.

16. Both Ito and Ogawa are engaged in exploring the effect of electrical fields upon the preservation of food by freezing.

17. It would have been obvious to incorporate the temperature ranges of Ito and the voltage ranges of Ito into the process of Ogawa, with a reasonable expectation of success, since the changes would involve minor changes as to the temperature used and the ranges of voltages.

18. As to the process changing the voltages and cooling phases listed in claims 17-22, this consists of applying the specified voltages, disclosed by Ito, and the use of the timer of Ogawa, disclosed above, such that the AC and DC voltages are applied, then turned off and the cooling continued. Ito teaches applying DC voltages and AC voltages separately, and sequentially, and the application of the selected voltages can be controlled by a timer. (drawing 13, ¶24, 25,'531) Thus disclosing the three phases of the instant application.

19. As to the amendment of claims 21 and 22, specifying the use of the procedure on agar jelly, the applicant has not established the criticality of the claimed element. Applicant

has stated that the procedure can be applied agar jelly, meat, seafood, vegetables an fruit, confections, frozen desserts, bread, daily dishes, pickled products, drinks, liquors and food additives, and raw foods. (¶3, pg 6 to ¶1, pg 7, ¶1, pg 8, ¶3, pg 15, ¶ 2, pg 38, specification)

20. (Claimed elastomeric polyurethanes which fell within the broad scope of the references were held to be unpatentable thereover because, among other reasons, there was no evidence of the criticality of the claimed ranges of molecular weight or molar proportions.). For more recent cases applying this principle, see *Merck & Co. Inc. v. Biocraft Laboratories Inc.*, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989); *In re Kulling*, 897 F.2d 1147, 14 USPQ2d 1056 (Fed. Cir. 1990); and *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

Response to Amendment

21. The applicant having amended claims 17-22, the 35 USC § 112 2nd rejections thereunto are instituted.

Response to Arguments

22. Applicant's arguments, see ¶ 3 &4, pg 8, remarks filed 01/21/11, with respect to 35 USC 112 1st rejection of claims 17-

22 have been fully considered and are persuasive. The 35 USC 112 1st rejection of claims 17-22 has been withdrawn.

23. Applicant's arguments filed 01/21/11 have been fully considered but they are not persuasive.

24. The applicant states that Ogawa does not disclose imposing both AC and DC voltages. (¶ 2, pg 9, remarks)

25. To reply, Ogawa discloses the direct current is superimposed with an alternating current. (clm 5, '677)
Clearly, both DC and DC are used.

26. The applicant seeks to make a distinction between the application of an electrical potential and an electrical field.

27. However, it would have been obvious to one of ordinary skill in the art that an electrical potential creates an electrical field. They are inextricably linked, and one cannot exist without the other.

28. Further, the prior art is applying the voltage to the tray in the refrigerator/freezer, the food is on the tray, and thus the voltage is applied to the food.

29. It would have been obvious to one of ordinary skill in the art that applying an electrical potential to a tray which contains a food item, that the food item will then have the electrical potential impressed upon it. The electrical field will necessary accompany the electrical potential. A common

experiment that demonstrates the electrical field associated with a potential is to place small pieces of paper on a surface, then charge the surface electrically, and the small pieces of paper will align themselves with the field, standing upright on the surface.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

31. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY W. ANDERSON whose telephone number is (571)270-3734. The examiner can normally be reached on 7 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. SAYALA/
Primary Examiner, Art Unit 1781

/J. W. A./
Examiner, Art Unit 1781

